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# The Carices of the Upper Half of the Keweenaw Peninsula.

## CAREX NOTES.—XIII.

By L. H. Bailey.

Mr. O. A. Farwell, Phœnix, Michigan, has sent me for determination a complete set of the carices which he has collected in his vicinity during the last four or five years, and the list affords so good a contribution to the knowledge of the geographical distribution of certain species, and is so large a record of the carex flora of a little known and interesting region, that I submit it for publication. Keweenaw County comprises the end of a small and narrow peninsula which juts into the main body of Lake Superior from the southward. It lies wholly above the 47th degree of latitude, and is the most northerly portion of the United States lying in or east of the Great Lakes. Its climate must be almost wholly dominated by Lake Superior. As in all regions adjacent to the Great Lakes, the flora is anomalous. It presents a curious admixture of northern and southern types, yet the northern types are not particularly marked. The writer has always observed this tendency of southern types to creep northwards along the Great Lakes, particularly on the shores opposite the direction of the prevailing winds. These winds, traversing the warmer area of the water, maintain the winter temperature on the shores upon which they blow at a higher point than it reaches upon the opposite side. Thus it appears to be true that the flora of the eastern shore of Lake Michigan has in it more plants of a southern type than has the western shore; at any rate, it is true that the western shore of the State of Michigan presents in its flora a warmer cast than does the eastern shore of the State. Mr. Farwell's plants come from the western side of the Keweenaw peninsula. It would be interesting to compare with them the plants of the eastern side.

The plants which seem to be particularly out of place so far north are *Carex squarrosa*, *C. virescens* var. *costata*, *C. Davisii*, and *C. Jamesii.* On the other hand, there are none which seem to be out of place so far south.

The range of *C. exilis* is much extended by the collection of this plant on the Keweenaw Penisula. The most western locality heretofore known for it is in Wayne Co., Western New York, where it has been collected by E. L. Hankerson. Mr. Farwell writes: "I first collected it in 1884 in a swamp between the Osceola and Calumet mines in Houghton Co., about twelve or thirteen miles from here, where it was very plentiful. I collected it again about six miles northwest of here, in Keweenaw Co., in 1887." *C. exilis* is a rare species, and this extension of range is important.

This region, in common with our whole northern boundary apparently, presents the most perplexing similarities in some of the varities of *C. tribuloides*, *C. scoparia*, and *C. straminea*.

The list comprises sixty-four entries. Following each entry, I have inserted the number which it bears upon Mr. Farwell's label.

C. *pauciflora*, Lightf. 519.
C. *Michauxiana*, Bœckl. 664, 665. Frequent in meadows.
C. *intumescens*, Rudge. 614. Common.
C. *oligosperma*, Michx. 661. Frequent.
C. *utriculata*, Boott, 663, 663a, 663b, 714, 714b. Common.
C. *utriculata*, Boott, var. *minor*, Boott, 714a, 715, 715a.
C. *monile*, Tuckm. 662, 716, 716a, 716b.
C. *retrorsa*, Schw. 609, 689. Common.
C. *lurida*, Wahl. (*C. tentaculata*, Muhl.) 703. Frequent.
C. *hystricina*, Muhl. 634, 688.
C. *squarrosa*, Linn. 699. Frequent.
C. *scabrata*, Schw. 651. Common.
C. *Houghtonii*, Torr. 632, 633.
C. *filiformis*, Linn. 640. Frequent.
C. *fusca*, All. 615.
C. *stricta*, Lam. 569, 565a, 566, 566a, 566b, 566c. Frequent.
C. *stricta* × *filiformis*, Bailey, 613. The only station known for this well-marked hybrid.
C. *crinita*, Lam. 569, 568, 568a, 568b.
C. *Magellanica*, Lam. 608.
C. *limosa*, Linn. 606, 607.
C. *virescens*, Muhl. var. *costata*, Dewey, 697.
C. *castanea*, Wahl. 611.
C. *arctāta*, Boott, 610.

C. *arctata*, Boott, var. *Faxoni*, Bailey, 639.
C. *arctata* × *flexilis*, Bailey, 612.
C. *debilis*, Michx. var. *Rudgei*, Bailey, 610a, 637, 638, 638a.
C. *gracillima*, Schw. 655. Common.
C. *gracillima*, Schw. var. *humilis*, Bailey, 656.
C. *Davisii*, Schw. & Torr. 700.
C. *Crawei*, Dewey, 701.
C. *granularis*, Muhl. 704.
C. *flava*, Linn. 670, 671, 672, 672a 673. Common.
C. *pallescens*, Linn. 570.
C. *laxiflora*, Lam. var. *varians*, Bailey, 657, 713. Common.
C. *Saltuensis*, Bailey, 243.
C. *aurea*, Nutt. 635, 636. Common.
C. *pedunculata*, Muhl. 41. Common.
C. *Pennsylvanica*, Lam. Common in sand.
C. *communis*, Bailey, 652, 652a.
C. *communis*, Bailey, var. *Wheeleri*, Bailey, 653.
C. *varia*, Muhl. (*C. Emmonsii*, Dewey), 40.
C. *deflexa*, Hornem. var. *media*, Bailey, 244. Bluffs.
C. *Jamesii*, Schw. 698. Infrequent.
C. *polytrichoides*, Muhl. 520. Common.
C. *stipata*, Muhl. 522. Common.
C. *vulpinoidea*, Michx. 521. Common.
C. *tenella*, Schk. 523.
C. *exilis*, Dewey, 389.
C. *echinata*, Murr. var. *cephalantha*, Bailey, 555.
C. *echinata*, Murr. var. *microstachys*, Bœckl. 556.
C. *canescens*, Linn. 604.
C. *canescens*, Linn. var. *vulgaris*, Bailey, 605. Frequent in swamps.
C. *canescens*, Linn. var. *alpicola*, Wahl. 625. Frequent on dry, sterile hills.
C. *canescens*, Linn. var. *polystachya*, Boott, 624.
C. *trisperma*, Dewey, 524.
C. *bromoides*, Schk. 702. Infrequent.
C. *Deweyana*, Schw. 603, 603a.
C. *tribuloides*, Wahl. var. *reducta*, Bailey, 685.
C. *tribuloides*, Wahl. var. *Bebbii*, Bailey, 684, 684a, 683c.

*C. tribuloides*, Wahl. var. *cristata*, Bailey, 683a.
*C. scoparia*, Schk. 601, 602a.
*C. scoparia*, Schk. var. *minor*, Boott, 602.
*C. straminea*, Willd. 683b.
*C. straminea*, Willd. var. *mirabilis*, Tuckm. 683.

## Pinus Banksiana at the West.

By E. J. Hill.

In the BULLETIN for November, 1889, are two articles on the presence of *Pinus Banksiana*, Lamb., on the coast of Maine, and the impression left by reading the article is, that this station is farther south than any yet reported. In "Garden and Forest" for December 4th, the statement is repeated. A record of a more southern locality is made in Professor Sargent's "Report on the Forests of North America," in one of the volumes of the tenth census, and is quoted in one of the articles. But it is evidently misunderstood, and may be slightly misleading to a casual reader. It is reported as found on "the southern shore of Lake Michigan." This may be taken for a part of the southern peninsula of Michigan, which, in its northern part, extends eastward from Grand Traverse Bay, the lower end of Lake Michigan having an easterly trend for some distance. But if we substitute for this statement "shore of the south end of Lake Michigan," all liability to mistake is removed, and a locality is named considerably further south than that at Frenchman's Bay in Maine. Thinking a detailed account of the distribution of this pine may be of interest to botanists and worth recording, I have compiled this article from my notes and observations and from other available sources regarding its presence west of Lake Huron.

To begin with the locality nearest to Chicago, that at the south end of Lake Michigan, we have one in latitude 41° 35′, or nearly two hundred miles south of that in Maine, and the most southerly of any yet named, as far as I can learn. This is in the counties of Lake and Porter, Indiana. I know of no other localities where it could be expected to occur, unless it be the next two counties south, Newton and Jasper, where there is a similar region of barren sand hills near the marshes of the Kankakee River, and around the head waters of the Iroquois. This was